

AMENDMENTS TO THE SPECIFICATION:

Please delete the paragraph starting page 4, line 5, and replace it with:

wherein a gap is formed between the first and second optical sections, the gap allows part of light emitted from the light emitting element to be radiated from the first optical section as nearly parallel light converged in the direction vertical perpendicular to the center axis of the light emitting element, and the second optical section includes a reflection surface to reflect the nearly parallel light in the direction parallel to the center axis of the light emitting element.

Please delete the paragraph starting page 6, line 7, and replace it with:

Herein, a term “convergence (or converging)” means, including to converge light like a spot in the direction of Z-axis, to radiate light in the direction parallel to the Z-axis, to converge light in the direction vertical perpendicular to the Z-axis, and to converge light in the direction of a predetermined angle to the Z-axis.

Please delete the paragraph starting page 7, line 24, and replace it with:

The first optical section **51** is disposed around the LED element **4** to refract light emitted from the LED element **4** in the nearly horizontal X-axis direction vertical perpendicular to the optical axis Z. It has a convex curved surface that allows emitted light of about **45** to **90** degrees to the Z-axis to be radiated being refracted in the direction parallel to the X-axis. The convex curved surface is shaped by rotating around the Z-axis an ellipse that has a symmetrical axis on the X-axis, a distance D_1 from its origin point to elliptic center, a diameter $n * D_1$ in the X-axis direction, and a diameter $\sqrt{n^2 - 1} * D_1$ in the Z-axis direction. n is a refractive index of lens material. In case of epoxy resin and polycarbonate resin, $n \approx 1.5$. D_1 is an arbitrary value to determine a homothetic ratio.

Please delete the paragraph starting page 10, line 14, and replace it with:

A drive section (not shown) applies a drive voltage to the wiring patterns 3A, 3B. The LED element 4 emits blue light based on the drive voltage. Of blue light emitted from the LED element 4, light in a range of about 45 degrees from the Z-axis is radiated in the direction parallel to the Z-axis while being converged by the second optical section 52. On the other, light thereof in a range of about 45 to 90 degrees to the Z-axis is radiated in the direction vertical perpendicular to the Z-axis while being refracted by the first optical section 51. Thus, nearly all lights emitted from the LED element 4 are radiated in the Z-axis direction or in the direction vertical perpendicular to the Z-axis. Light being radiated in the direction vertical perpendicular to the Z-axis is then externally radiated in the direction parallel to the Z-axis while being reflected by the reflection surface 8A.

Please delete the paragraph starting page 11, line 1, and replace it with:

(1) The light utilization efficiency is enhanced to increase the brightness since all the amount of light emitted from the LED element 4 is controlled by the lens section 5 composed of the first optical section 51 to converge emitted light in the X-axis direction vertical perpendicular to the Z-axis and the second optical section 52 to converge emitted light in the Z-axis direction.

Please delete the paragraph starting page 18, line 10, and replace it with:

On the other hand, light emitted from the LED element 4 in a range of greater than about 45 degrees to the Z-axis is radiated refracted by the side lens of first optical section 51 in the direction vertical perpendicular to the Z-axis, entered vertically perpendicularly to the incident surface 52A of second optical section 52, reflected on a reflection surface 52B in the direction parallel to the Z-axis, entered vertically perpendicularly to a light radiation surface 52C, radiated outside the package in the direction parallel to the Z-axis.

Please delete the paragraph starting page 22, line 3, and replace it with:

The LED package 1 of this embodiment has, different from that of the first embodiment, a lens section 5 that is composed of a first optical section 51 to radiate refracting light emitted from the LED element 4 in the direction vertical perpendicular to the Z-axis, a second optical section 52 to radiate converging light emitted from the LED element 4 in the Z-axis direction, and a third optical section 53 to radiate light emitted from the LED element 4 in the Z-axis based on total reflection.

Please delete the paragraph starting page 22, line 11, and replace it with:

The first optical section 51 is provided with a convex surface that allows light emitted from the LED element 4 in a range of about 60 to 90 degrees to the Z-axis to be radiated refracted in the direction vertical perpendicular to the Z-axis.

Please delete the paragraph starting page 23, line 27, and replace it with:

The first optical section 51 is provided with a convex surface that allows light emitted from the LED element 4 in a range of about 60 to 90 degrees to the Z-axis to be radiated refracted in the direction vertical perpendicular to the Z-axis.

Please delete the paragraph starting page 25, line 10, and replace it with:

Although in the above embodiments almost all lights emitted from the LED element 4 is radiated parallel to the Z-axis based on convergence or reflection, the radiation direction is not limited to one direction. For example, the LED package 1 of the invention may have an optical surface shape to externally radiate light in a range of within a predetermined angle to the Z-axis or to provide an asymmetrical lighting distribution between the X-axis and Y-axis directions. Also, it may radiate light by controlling the lighting distribution into several directions such as the optical axis Z direction and a direction vertical perpendicular to the Z-axis.

Please delete the paragraph starting page 25, line 21, and replace it with:

As described above, the invention intends to obtain a high control efficiency or to solve various problems by that light difficult to control or light to cause the various problems in controlling it because of being emitted to an inclined direction (e.g., a direction of greater than 45 degrees to the Z-axis) from the LED element is converged in the direction nearly vertical perpendicular to the Z-axis.